Extended Product Responsibility Through Voluntary Partnership

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I. INTRODUCTION

The US Environmental Protection Agency (EPA) welcomes this opportunity to host one of the four international workshops in the OECD's ongoing research program on Extended Producer Responsibility. The challenge to reduce waste and ensure sustainable commerce is a problem all developed nations confront and one developing countries will increasingly face. Addressing these challenges will require creativity, ingenuity and cross-border idea sharing of just the sort that the OECD is making possible through its research on Extended Producer Responsibility.

The once revolutionary ideas from Sweden and Germany on producer responsibility for products at end of life are now an acknowledged fact of life in Europe, Japan and elsewhere. An indisputably powerful concept, producer responsibility is attracting the attention of industry, academia, environmental activists and government and is changing the way we all think about products and waste. However, like all countries, the United States must balance its own particular needs, traditions and political realities in assimilating this new idea.

As EPA has said many times in the context of the OECD's Producer Responsibility research program, we have a different philosophy here. This philosophy – known as **Extended Product Responsibility** – recognizes the need to reduce environmental impacts of products at all stages of their life cycle, including end of life. Extended Product Responsibility acknowledges that producers play a central role in reducing the environmental impacts of their products, but recognizes that they cannot always do this alone. Thus, all participants in the product chain -- including suppliers, retailers, consumers, disposers and government -- must help. Because of the diversity of products, players and environmental challenges, Extended Product Responsibility recognizes that many different policies and approaches will be needed. Finally, Extended Product Responsibility emphasizes voluntary action over mandates. This is consistent with EPA's new approach to environmental management: one that stresses collaboration and partnerships over command and control. Mandates may be necessary in some circumstances, but voluntary approaches will be the preferred route where possible.

The purposes of this paper are three: 1) to review EPA's experience with voluntary programs as a means to reduce life cycle environmental impacts of products; 2) to outline how our philosophy might translate into a comprehensive, voluntary Extended Product Responsibility program at the Federal level; and 3) to urge the OECD to consider voluntary product responsibility approaches as a legitimate alternative to producer responsibility mandates.

II. THE POWER OF VOLUNTARY PROGRAMS TO REDUCE PRODUCT LIFE CYCLE IMPACTS

Achieving meaningful reductions in the life cycle impacts of products, including reduced waste at end of life, will require a combination of policy approaches, including: 1) incentives for manufacturers to design and sell less wasteful and more readily recyclable products; 2) incentives and education for consumers to choose environmentally preferable products and to reuse, recycle or properly dispose of their products at end of life; and 3) incentives and know-how for municipalities to make their recycling and waste management programs more efficient. Only such a "systems approach", which necessarily engages producers, consumers, government and others in the product chain, can bring about the kind of long-term product design and materials infrastructure

changes that are clearly needed. Because systems solutions are difficult, if not impossible, to legislate through command and control means, a wide variety of policy tools and approaches will be needed, especially those that create and sustain partnerships and collaboration amongst the multiple players in product systems.

Over the last decade, EPA has experimented with voluntary programs as a means of reducing the life cycle environmental impacts of products, including waste from products at end of life. The body of literature evaluating voluntary programs recognizes this approach as an innovative means to gain additional progress in environmental protection at a lower cost to society.

In this section, I will describe EPA's experience with a number of voluntary programs, including several which, consistent with the idea of Extended Producer Responsibility, spur producers to reduce the impacts of their products.

EPA's voluntary programs motivate business to "green" their products and processes in the following ways:

1) by making improved environmental performance a priority for business;
2) by increasing demand for "green" products;
3) by providing companies recognition for "greener" performance; and
4) by improving the flow of technical information to manufacturers to reduce the cost of environmental innovations.

1) Making improved environmental performance a priority for business

Businesses juggle numerous priorities every day, including reducing costs, improving product quality, and increasing market share. In order for environmental performance to compete for attention, businesses have to see that it can benefit business, e.g., by increasing materials use efficiency, saving money, sparking design innovations, improving product quality, reducing pollution and its related liabilities and costs, and enhancing competitiveness. (Shelton & Shopley, 1998; Steinzor, 1998; Crane, 1997)

The **WasteWise Program** has raised the profile of business waste by following the old business adage: "if you measure it, you pay attention to it" and by showing business that waste reduction (not only for them, but for their customers) helps the bottom line. Today with over 800 partners, the WasteWise Program challenges businesses to reduce, reuse, and recycle materials in their own offices and factories and to find ways to reduce waste for their customers as well. EPA representatives work with participants to set waste reduction goals and devise strategies to achieve those goals. Partners file annual reports on progress toward their goals. The program also provides technical assistance and opportunities for businesses to network with peer companies to learn waste reduction techniques.

WasteWise reported waste prevention for 1997 totaled more than 816,000 tons, saving an estimated $88 million in avoided disposal and materials purchasing costs for partners. In addition, partners collected nearly 7 million pounds of materials for recycling, saving an estimated $218 million in avoided disposal fees. In 1997, one company, Herman Miller, Inc., saved more than $9 million through its waste reduction and recycling efforts.

Likewise, the **GreenLights Program** highlights the environmental and business benefits of using energy-efficient lighting. By actively seeking out businesses and helping them to identify where conversion to energy-efficient lighting will be economically attractive, the program helps overcome the inertia that prevents profitable energy-saving investments. Once companies understand that their investment will pay off quickly and handsomely (often an investment can yield greater than 20 percent return), they are eager to participate. As of 1996, GreenLights participants (totaling well over 2,000 partners) reported upgrading 1.3 billion square feet of floor space resulting in energy savings equivalent to the average electricity consumption of roughly 360,000 households. EPA

estimates that the program will result in savings equivalent to the average electricity consumption of 2.3 million households in the year 2000. (GAO, 1997) In addition, this program has spurred the development of new energy efficient lighting products.

2) Increasing Demand for Green Products

Only strong demand for environmentally friendly products ensures their survival in the marketplace. EPA's ***Energy Star*** Program has helped increase consumer demand for energy efficient products through public education and labeling. Product manufacturers voluntarily adopt the *Energy Star* label indicating that their product is energy efficient based on EPA's program specifications. The *Energy Star* Program also maintains a hotline and a web site that allows consumers to identify products that meet their program specifications and stores that sell those products. This program has made significant strides in encouraging the production and purchase of energy-efficient appliances, lighting, heating, air conditioning and office equipment for both home and office use.

Harnessing government buying power is another way to drive greener product development. Under EPA's **Procurement Guidelines** for recycled-content products and its **Environmentally Preferable Purchasing Program,** the Federal government uses its power as a consumer of goods and services to set the example for other consumers and to reward manufacturers that produce greener products. Although these programs dictate Federal government procurement standards and so are not strictly speaking voluntary programs, they have fostered voluntary adherence to Federal standards by a significant portion of the buying public. For example, the Environmentally Preferable Purchasing Program has worked with office cleaning contractors and building maintenance staff to identify attributes of "greener" office cleaning products resulting in widespread use of less toxic cleaners.

3) Providing Recognition for "Greener" Performance

Public recognition of businesses for superior environmental performance is a strong motivator for businesses to make voluntary environmental improvements. This recognition can lead to improved public image, increased consumer goodwill and investor confidence, thereby improving the overall value and competitiveness of a company. (Khanna and Damon, 1998)

EPA's **33/50 Program** demonstrates the power of public recognition to drive voluntary environmental improvement. Established in 1991, the 33/50 Program challenged participants to reduce 17 specific toxic chemicals by 33 percent in 1992 and 50 percent in 1995. Some 1,300 participating companies obtained certificates which they could publicize in their annual reports and other company material to demonstrate environmental accomplishments. The program met its 33 percent goal one year ahead of schedule and exceeded it by over 100 million pounds; the 50 percent reduction goal was achieved in 1994—one year earlier than expected. Recognition from the Federal government was a strong motivator for participants in this program (Arora and Cason, 1995; Davies and Mazurek, 1996). EPA showcased companies that were successful in achieving pollution reductions and publicized them in EPA media outreach, documents and newsletters. Peer pressure was also a factor. As larger companies began participating, more smaller and medium-sized companies joined in. The program's goals eventually became defacto industry standards as the program's target list of 17 chemicals became a focus for reduction by nonparticipating organizations. Some companies even expanded their reduction commitments beyond the 17 targeted chemicals because it made sense to evaluate pollution prevention opportunities for all chemicals at the same time.

By channeling the natural competitiveness of the marketplace, government challenges can also bring about important environmental advances in products. The **"Golden Carrot" Super-Efficiency Refrigerator Program** spurred the design and manufacture of energy efficient refrigerators by offering incentive money and recognition to the manufacturer that could create the most energy efficient model. This program, jointly organized by EPA, two

environmental groups, and two electric utilities,[1] generated a total of 14 refrigerator design proposals. Whirlpool's winning entry used about 40 percent less energy than required under the 1993 Federal efficiency standards. This model became the new industry standard. (Energy Foundation, 1998)

4) Improving flow of technical information

Businesses of all sizes, but especially small and medium-sized companies, benefit from research and development assistance in the area of environmental innovation. (Stach, 1997) Government-funded demonstration projects and technical assistance programs help lower R&D costs, demonstrate the viability of "cleaner" technologies, bring together experts in environmental innovation, encourage more systems-oriented thinking, and help to ensure the participation of other partners in the product chain. Technical assistance from the government and from the networking with other businesses made possible by the program was an important factor in the success of the **33/50 Program**. (Khanna and Damon, 1998).

EPA's **Design for the Environment (DfE) Program** is another case in point. The DfE Program helps to incorporate environmental risk as well as performance and cost considerations into the design and re-design of products and processes. EPA works with an industry sector to evaluate technology and chemical alternatives using performance, cost, and human health and environmental risk criteria. Perhaps best illustrating the shared product responsibility paradigm at work is DfE's work on garment and textile care. The DfE Program started out working with dry cleaners on cleaner substitutes for dry cleaning solvents. It soon became clear, however, that technologies and practices employed by the garment care segment have the potential to influence clothing design and materials choices upstream by fabric and garment manufacturers. As a result, the DfE Program is now undertaking a systems analysis of the garment and textile care industries, attempting to identify garment construction and cleaning techniques that are compatible, environmentally benign and economically feasible. This approach will enable the program to identify ways to prevent pollution and increase materials use efficiency, by understanding and taking advantage of the interrelationships among the groups that design and produce fabrics and garments as well as those that purchase, use and clean them. The DfE Program is currently evaluating the life-cycle environmental impacts of flat panel displays and cathode ray tubes.

III. POSSIBLE ELEMENTS OF A VOLUNTARY FEDERAL PROGRAM

Some of the voluntary programs described above provide ongoing mechanisms for driving product innovation and waste reduction by business. EPA could combine key elements from these programs with others to create a comprehensive program of Extended Product Responsibility designed to address product systems in a holistic fashion. Steps in formulating such a program could include: 1) identifying priority product systems; 2) using the convening power of EPA to assemble the necessary players in the product life cycle (including materials suppliers, manufacturers, distributors, consumers, and the recycling and waste management sectors); 3) receiving input from these players to establish goals, assess options and issue challenges; and 4) providing assistance to the various players in meeting those challenges through education, development and dissemination of tools, research and technical assistance, and demonstration projects.

[1] The Natural Resources Defense Council, the American Council for an Energy-Efficient Economy, Pacific Gas and Electric, and Southern California Edison.

EPA has not decided to launch a comprehensive voluntary program of Extended Product Responsibility at the national level. However, Table 1 below presents some elements that EPA might consider should such a program take shape.

Table 1
Possible Elements of a Voluntary Extended Product Responsibility Program

Program Element	Description/Possible Activities
Outreach/education	Identify priority product sectors and disseminate case studies illustrating how shared product responsibility initiatives are helping businesses in those sectors become more competitive.
Tools development/dissemination	Identify/develop/enhance DfE and environmental accounting tools that can help facilitate shared product responsibility initiatives and investments by business.
Voluntary environmental information disclosures	Issue guidelines for voluntary reporting on the environmental attributes of products that allow consumers to make informed product choices and spur competition among producers.
Challenge/recognition programs	Using the 33/50 model, set target level reductions for select product life cycle impacts and offer public recognition for all relevant actors in the product chain within the prescribed time-frame. Reductions could be measured within several categories (e.g., material use, toxics use, energy consumption, recycled content, time until obsolescence, recovery at end of life).
Challenge/award programs that target specific technological barriers for environmental product improvements	Employ the Golden Carrot program model to speed breakthroughs in technologies that improve life-cycle impacts of specific types of products.
Demonstration Projects to help identify beneficial shared product responsibility initiatives	Choose key product sectors that could benefit from innovative demonstration projects, test alternative product design, production and logistics issues, and challenge the relevant product chain actors to adopt proven strategies.
Technical assistance	Expand the DfE program to focus on systems solutions for priority product systems, including reducing product waste at end-of-life. Establish a clearinghouse of relevant EPA and other data.

IV. Conclusion

The US does not yet have a comprehensive voluntary program of Extended Product Responsibility. Nor do any of the EPA voluntary programs discussed above shift waste management costs from the public sector to product producers. Nevertheless, these voluntary programs are helping to make progress towards some of the same ends as "producer take-back" and "producer-pays" mandates by encouraging producers to take a closer look at their products and processes to reduce their environmental impact, including impact at end of life.

Contrary to their image as "feel-good" efforts that do little to spur real change by business, evaluations of voluntary environmental programs indicate that these programs can create powerful incentives for change by the private sector by highlighting the business benefits of helping the environment –- benefits such as cost savings due to improved material use efficiency, design innovations and product quality improvements, improved public image, increased customer goodwill and increased investor confidence.

Voluntary approaches can also bring about important environmental benefits over and above "business as usual" trends. The OECD itself, in a recent report, concluded that voluntary programs can have modest environmental effects. (OECD 1998). While they may not go "as far or as fast" toward goals as mandatory approaches, voluntary partnerships can bring about incremental improvement at the very least. Even greater effect can be garnered from voluntary approaches if they are recognized as a means of staving off mandates. Depending on political circumstances, voluntary programs can bring about significant improvements in less time than would be required to mandate the same result.

Voluntary programs are likely to be more cost-effective than mandatory approaches. The OECD itself has so found. (OECD 1998) Voluntary approaches let businesses find the least-cost way to achieve the desired results, and reduce private sector information and transactions costs associated with mandatory compliance. Voluntary approaches can also be less burdensome to government. While the OECD concludes that savings in "traditional" administrative costs to government (due to low monitoring and enforcement requirements) are off-set by greater technical assistance to the private sector, the OECD finds that voluntary programs result in significant diffusion of technical knowledge and best practices to participating companies -- an important "soft" effect of voluntary programs, the benefit of which is impossible to quantify. (OECD 1998)

Finally, as the OECD itself recognizes, different countries, different environmental problems and different products will necessitate different approaches. For some products and for some countries or localities, voluntary approaches may be the only viable option at a given point in time.

For all of these reasons, voluntary approaches hold significant promise and are worth serious and positive consideration by the OECD in its research on Extended Producer Responsibility. A voluntary approach which concentrates on reducing product life cycle impacts is certainly one which EPA would consider worth trying in the United States.

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